MATTERS ARISING

Fournier's gangrene and HIV disease

We were surprised to read the recent claim by Nelson and colleagues to have described the first case of Fournier's gangrene in a patient with HIV disease.[1] Contrary to the authors' assertion, this was in fact first reported in this very journal a little more than a year previously.[2] Moreover, the clinical features of the case described by Nelson *et al* are somewhat unusual and merit further comment.

Fournier's gangrene is a well defiined syndrome of necrotising fasciitis of the male genitalia and perineum leading to gangrene of the overlying dermal tissues.[3] It is caused by a synergistic polymicrobial infection of the subcutaneous tissues, which spreads rapidly along the fascial planes. Although in severe cases this necrotising infection can spread to involve the anterior abdominal wall, few reports have documented this process extending as far as the axilla.[4,5] In the case described by Nelson *et al* the patient had widespread ulcerating lesions affecting the axilla, both groins and cornea in addition to scrotal necrosis. It is unclear, however, if the axillary lesion was a direct result of contiguous infection spreading from the scrotum and groin or caused by a separate or secondary pathological process. Did the surgical debridement consist of removal of necrotic scrotal tissue alone or was more extensive incision and drainage of subcutaneous tissues required, up to and including the axilla?

Pseudomonas aeruginosa, which was isolated from the blood and groin lesion in the authors' case, is associated with a number of specific cutaneous lesions.[6,7] Although it has been identified as an aetiological agent in Fournier's gangrene,[8] it is classically associated with an infective necrotising vasculitis which results in a distinctive necrotic skin lesion—ecthyma gangrenosum. The clinical description of ecthyma gangrenosum and its cutaneous distribution bear a striking resemblance in nature and pattern to the lesions described by Nelson *et al.* Ecthyma gangrenosum lesions are characterised by round, indurated, ulcerated areas with black necrotic centres.[6,7] They can be single or multiple, cause extensive tissue damage and are typically found in the groin, scrotum, perineum and axilla.[6] Although experimental evidence suggests that ethyma gangrenosum can arise from local invasion, in general it is regarded as a specific manifestation of severe systemic pseudomonas infection, usually in immunocompromised and often neutropenic hosts.[6]

Histological distinction of these conditions should be possible. Ecthyma gangrenosum is characterised by a necrotising vasculitis with bacterial invasion of the media and adventitia of arterial and venous walls with a sparse neutrophil infiltrate and little or no intimal involvement.[9,10] Occasionally fibrin thrombi are found in small vessels. In contrast, Fournier's gangrene causes an obliterative endarteritis with prominent subcutaneous vessel thrombosis which is responsible for the subcutaneous tissue necrosis and dermal gangrene.[3]

The diversity in case description in the literature suggests that the diagnosis of Fournier's gangrene of the scrotum is not uncommonly a misnomer.[11] Given the similarities of this reported case of Fournier's gangrene to the clinical and microbiological description of ecthyma gangrenosum, histology of the cutaneous lesions would have proved of considerable interest.

M MURPHY
Department of Genitourinary Medicine, The General Infirmary of Leeds, Leeds LS1 3EX, UK

FIONA MULCAHY
Department of Genitourinary Medicine, St. James's Hospital, Dublin

1 Nelson MR, Cartledge J, Barton SE, Gazzard BG. Fournier's gangrene following hyfrecation in a male infected with the human immunodificiency virus. *Genitourin Med* 1993;68:401–2.
2 Murphy M, Buckley M, Corr J, Vinayagamoorthy S, Grainger R, Mulcahy FM. Fournier's gangrene of scrotum in a patient with AIDS. *Genitourin Med* 1991;67:339–41.
3 Jones RB, Hirschmann JV, Brown GS, Tremann JA. Fournier's syndrome: necrotising subcutaneous infection of the male genitalia. *J Urol* 1979;122:279–82.
4 Gibson TE. Idiopathic gangrene of the scrotum: with report of a case and review of the literature. *J Urol* 1930;23:125–59.
5 Pande SK, Mewara PC. Fournier's gangrene: a report of 5 cases. *Br J Surg* 1976;63: 479–81.
6 Bodey GP, Bolivar R, Fainstein V, Jadeja L. Infections caused by *Pseudomonas aeruginosa*. *Rev Infect Dis* 1983;5:279–313.
7 Hall JH, Callaway JL, Tindall JP, Smith JG. *Pseudomonas aeruginosa* in dermatology. *Arch Derm* 1968;97:312–24.
8 Flanigan RC, Kursh ED, McDougal WS, Perskey L. Synergistic gangrene of the scrotum and penis secondary to colorectal disease. *J Urol* 1979;119:369–71.
9 Teplitz, C. Pathogenesis of pseudo-monas vasculitis and septic lesions. *Arch Pathol* 1965;80:297–307.
10 van den Broek PJ, van der Meer JWM, Kunst MW. The pathogenesis of ecthyma gangrenosum. *J Infect* 1979;1;263–7.
11 Lamb RC, Juler GL. Fournier's gangrene of the scrotum. A poorly defined syndrome or a misnomer. *Arch Surg* 1983;118:38–40.

BOOK REVIEWS

Molecular and Cell Biology of Opportunistic Infections in AIDS. Edited by S Myint and A Cann. London, Chapman and Hall. (Pp 283, £40) 1992. ISBN 0–412–45330–4.

The advances in molecular biology have revolutionised the prospects for a better understanding of both the biology and rapid diagnosis of infectious disease.

This book covers most aspects of the molecular and cell biology of opportunistic infections in AIDS and also attempts to explain the principles and applications of molecular techniques to these diseases.

Each chapter is divided into an introduction, which is followed by a section on antigenic and genetic organisation and ends with the molecular approaches to diagnosis. Importantly, a recent and comprehensive reference list concludes each chapter.

By way of introduction, the first two chapters include a clinical overview of opportunistic infections in individuals with AIDS together with the fundamental concepts regarding gene and probe amplification techniques. The subsequent chapters, especially those covering cryptosporidiosis, toxoplasma, candida, mycoplasma and herpes viruses, are informative and well written.

The book is aimed at clinicians and scientists and provides clear and concise updates on most of the main opportunistic infections in individuals with AIDS. It is a well presented and useful guide although it would have benefited from more illustrations, diagrams and tables. Some of the chapters could have expanded their sections on the molecular approaches to diagnosis bearing in mind the problems of serological studies in immunocompromised patients. In addition, by the editors' own admission, they could be criticised for excluding a discussion of cryptococcal infections and including a section on salmonella, shigella and campylobacter.

Although a broad spectrum of opportunistic infections is included, it would have been of interest to have had a small section concerning the polyoma viruses, such as JC virus, which causes progressive multifocal leucoencephalopathy in an estimated 4–7% of AIDS patients. This could have possibly been included with the herpesviruses in the setting of opportunistic viral infections.

Despite these minor reservations, it is a book that is a very useful reference, is excellent for dipping into and at £40 it would be a valuable edition to a departmental library.

MARK ZUCKERMAN

Candidiasis: Pathogenesis, Diagnosis and Treatment. Edited by Gerald P Bodey. New York, Raven Press, 1993. 2nd Ed. (Pp 420: US$119) ISBN 0-88167-954-2.

Candida infections increase year upon year in number and variety. They are encountered in general practice and a wide range of specialities. The use of broad spectrum antibiotics is still a common cause; however, there are more and more immunocompromised patients because of medical treatments for cancers and organ transplantation, as well as diseases such as HIV and AIDS. This multiauthor text succeeds in summarising knowledge of candida infections ranging from biology of the organisms involved, through clinical conditions and treatments, to the pharmacokinetics of antifungal agents. Like many texts that cover one subject it has something for everyone, but, perhaps not enough for the individual specialist.

The editor and the authors (with one exception) are all from the USA, many from Houston, Texas. They come mainly from the field of infectious diseases. Thus there is one contributor from dermatology but none from gynaecology or genitourinary medicine.

Consultants, specialists and trainees in genitourinary medicine in the UK will be particularly interested in three chapters, that on oral and esophageal candidiasis, and

those on genital candidiasis and antifungal agents.

Oral and oesophageal candidiasis are well and clearly described, the relatively few paragraphs here on HIV and AIDS reminding us that there are other causes. Diagnosis of oesophageal candidal infection is often difficult without endoscopy but the authors emphasise the valuable empiricism of several days fluconazole. Assessment of response to treatment will often establish a retrospective diagnosis.

Jack Sobel has contributed an excellent succinct chapter on all aspects of genital candidiasis, ranging from theories concerning pathogenesis to practical aspects of diagnosis. He describes his successful use of long term oral ketoconazole in recurrent vaginal candidiasis but most of us in the UK are wary of its toxicity, in particular hepatitis, though this is rare. We prefer various miconazole or clotrimazole regimens and hope that in future years a combination of fluconazole or itraconazole and vaginal therapy will become the successful norm. Sobel correctly states "*the contribution of sexual transmission to the pathogenesis of [Candida] infection remains unknown*". However, there is a statement in an earlier chapter (p. 40), "Genital candidiasis, is usually considered a sexually transmitted disease".

Gerald Bodey, the editor, provides a good summary of antifungal agents in the final chapter. Topical and systemic agents in current use are discussed including amphotericin B, flucytosine, the azoles, ketoconazole and the newer systemics fluconazole and itraconazole.

This text covers the whole field of candidiasis well. It would be a useful addition to a reference library. The book would be enhanced by a chapter on candida infections in HIV and AIDS, including in this a discussion on prophylactic regimens for oral, oesophageal and vaginal candidiasis.

MICHAEL J BALSDON

A Colour Atlas of Diseases of the Vulva. CM Ridley, JD Oriel, AJ Robinson. London, Chapman & Hall, 1992 (Pp 109). £60.00). ISBN 0-412-36520-0.

There has long been a need for an atlas of vulval diseases and the publication of this book is most welcome. Nearly 300 colour photographs are displayed within its covers, showing examples of both common as well as some relatively rare vulval disorders. Approximately 50 of the photographs illustrate histological features, infecting organisms or the skin changes which may accompany vulval disease.

The seven chapters cover the following topics: general principles; infections; non-infective, non-neoplastic conditions; tumour-like lesions and cysts, tumours; miscellaneous conditions; childhood lesions; child sexual abuse. In addition there are helpful lists of diagnoses grouped under broad headings of clinical features and symptoms, and appendices of the histological classification of vulval dystrophy and classification of vulvodynia. The principles of examination of the vulva and possible relevant investigations are briefly discussed, but further practical details would be needed by a practitioner embarking on the investigation of a patient. It would have been helpful to have shown examples of vulval appearance in black and Asian skin in addition to that in white skin.

The range of photographs covering vulval abnormalities is extensive, usually with several examples of the more common disorders. This is clearly an important feature in, for example, lichen selerosus et atrophicus where the clinical manifestations may be very variable. Vulval soreness and irritation are often initially thought to be due to candidosis, until proved otherwise and so I was somewhat disappointed to find relatively few illustrations of this condition. The quality of the photographs is generally good, but there are some which are out of focus or of an odd colour.

As with many medical colour atlases, striking a balance between the value of the visual content and the written text is a difficult challenge. In this atlas, the text is brief, but does venture beyond points of observation into aetiology and therapy. As a result, therapeutic suggestions are often single and dogmatic.

This is not a book to leave out on your coffee table at home, but it is a most useful book to have at hand in the clinic. It would be best used in conjunction with a more detailed text but certainly has a place in aiding diagnosis or consideration of possible diagnoses. Although the preface suggests that this is a book for genitomedical physicians, gynaecologists and dermatologists, I would also, and perhaps particularly, suggest that it would be a most valuable aquisition in paediatric departments and general practitioners' surgeries.

JANE C STERLING

If you wish to order or require further information regarding the titles reviewed here, please write to or telephone the BMJ Bookshop, PO Box 295, London WC1H 9JR. Tel: 071 383 6244. Fax: 071 383 6662. Books are supplied post free in the UK and for B.F.P.O. addresses. Overseas customers should add 15% for postage and packing. Payment can be made by cheque in sterling drawn on a UK bank or by credit card (Mastercard, Visa or American Express) stating card numbers, expiry date and full name. (The price and availability are occasionally subject to revision by the Publishers).

Correction

Engelkens H J H *et al:* The localisation of treponemes and characterisation of the inflammatory infiltrate in skin biopsies from patients with primary or secondary syphilis, or early infectious yaws (*Genitourin Med* 1993;**69**:102–7). In table 2, for cases of secondary syphilis (line $T_h > T_s$), the correct figure is 6 instead of 66.